

(19) World Intellectual Property  
Organization  
International Bureau



553644

(43) International Publication Date  
18 November 2004 (18.11.2004)

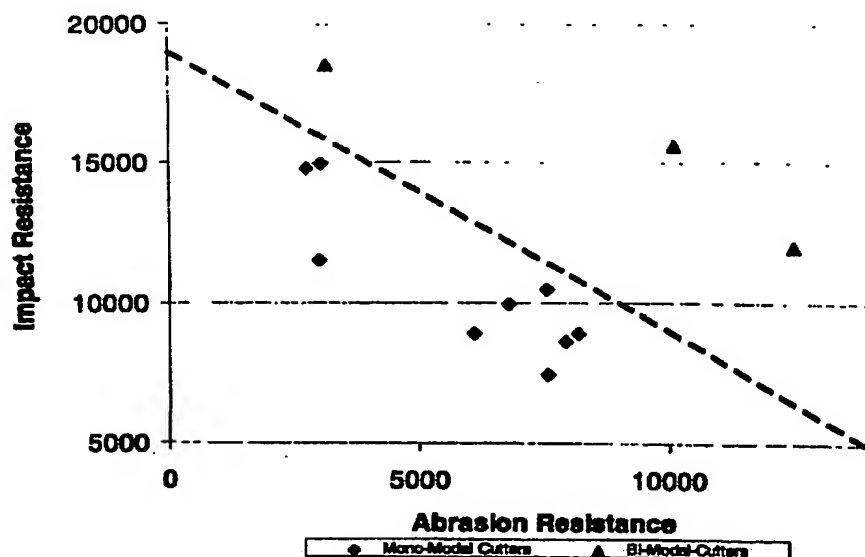
PCT

(10) International Publication Number  
**WO 2004/098875 A2**

- (51) International Patent Classification<sup>7</sup>: **B32B 18/00**
- (21) International Application Number:  
PCT/US2004/013779
- (22) International Filing Date: 3 May 2004 (03.05.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/467,311 2 May 2003 (02.05.2003) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: **POLYCRYSTALLINE DIAMOND TOOLS AND METHOD OF MAKING THEREOF**



(57) Abstract: The present invention is a tool insert. The tool insert includes a abrasive layer and a substrate. The abrasive layer has a periphery forming a cutting surface and is located on the substrate. The abrasive layer includes at least one of polycrystalline diamond or cubic boron nitride. The abrasive layer tool insert has a sum value of an impact resistance number and an abrasion resistance number that is  $\geq 19,000$ . The impact resistance number is equal to a total number of hits before failure of the tool insert. The abrasion resistance number is equal to equation (1) (1) abrasion resistance = final volume of granite removed by the tool insert (inch<sup>3</sup>)/final tool wear land area (inch<sup>2</sup>).

WO 2004/098875 A2



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